

REMARKS

On entry of this Response, claim 1 is amended to recite that “the air-releasing passage is aligned with the coolant discharge passage on the same side of the separator as the coolant discharge passage is positioned.” Support for the amendment can be found, for example, in Figures 5 and 6 and the corresponding description in the specification. No new matter is added.

Claims 3 and 4 were canceled previously. Now pending in the instant application are claims 1, 2, 5, and 6, of which claim 1 is independent. Applicants respectfully submit that the pending claims define over the art of record.

I. Claim Rejection under 35 U.S.C. §103(a)

Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. §103(a) as being unpatentable over US 6,403,247 (hereafter “the Guthrie reference”) in view of US 2001/0033954 (hereafter “the Gyoten reference”). See the Office Action, page 2. Applicants respectfully traverse this rejection in view of the amended claims.

A. Claim 1

Applicants respectfully submit that the combination of the Guthrie and Gyoten references does not teach or suggest that “the separator is in an upright position and a width of the separator is grater than a height of the separator, ... said coolant supply passage is provided at a middle position of one vertical end of said separator, and said coolant discharge passage is provided at a middle position of the other vertical end of said separator, ... the air-releasing passage is aligned

with the coolant discharge passage on the same side of the separator as the coolant discharge passage is positioned,” as recited in amended claim 1.

The claimed invention is directed to a fuel cell including a separator whose width is greater than its height, a coolant supply passage and a coolant discharge passage provided at opposite ends of the separator in the width direction, and an air-releasing passage positioned above the coolant discharge passage. Especially, *the air-releasing passage is aligned with the coolant discharge passage on the same side of the separator as the coolant discharge passage is positioned.* With the above feature of the claimed invention, it is possible to enhance the air discharging efficiency remarkably as compared with an air-releasing passage positioned at the same side as the coolant supply passage.

In the Office Action, the Examiner asserts that “Guthrie et al disclose a separator in an upright position and a width of the separator is greater than a height of the separator (See. Fig. 5).” See the Office Action, pages 4 and 7.

In Figure 5, which is referred to by the Examiner, Guthrie describes that two fuel cell stacks make up a fuel cell power plant (200) having a common, integrated fuel manifold (206), and a pair of integrated oxidant inlet and exhaust manifolds (225). A pair of interior coolant inlet manifolds (240) and a pair of interior coolant exhaust manifolds (244) are also provided to supply a coolant to the fuel cell power plant.

Although Guthrie describes a fuel cell stack in an upright position and having a width greater than a height in Figure 5, the power plant depicted in Figure 5 of Guthrie does not include any feature corresponding to the air-releasing passage recited in claim 1.

In the Office Action, the Examiner asserts that the coolant gas bent (742) depicted in Figure 11 of the Guthrie reference corresponds to the air-releasing passage recited in claim 1.

See the Office Action, page 3. The separator depicted in Figure 11 of the Guthrie reference, however, has a width *smaller* than the height. Figure 11 of the Guthrie reference does not teach or suggest that “the separator is in an upright position and a width of the separator is grater than a height of the separator,” as recited in claim 1.

Furthermore, Figure 11 of the Guthrie reference does not teach or suggest that “the air-releasing passage is aligned with the coolant discharge passage on the same side of the separator as the coolant discharge passage is positioned,” as recited in amended claim 1.

In the Office Action, the Examiner recognizes that “the air release passage 742 of Guthrie et al. is *not aligned* with the discharge passage of Guthrie et al. (emphasis added).” See the Office Action, page 4. As the Examiner recognizes in the Office Action, the Guthrie reference does not teach or suggest that the air-releasing passage is aligned with the coolant discharge passage on the same side of the separator as the coolant discharge passage is positioned, as recited in amended claim 1.

The Gyoten reference is cited by the Examiner to provide teachings for the feature that the separator includes metallic plates. The Gyoten reference, however, does not teach or suggest

that “the separator is in an upright position and a width of the separator is greater than a height of the separator, ... said coolant supply passage is provided at a middle position of one vertical end of said separator, and said coolant discharge passage is provided at a middle position of the other vertical end of said separator, ... the air-releasing passage is aligned with the coolant discharge passage on the same side of the separator as the coolant discharge passage is positioned,” as recited in amended claim 1. Although the Gyoten reference is combined with the Guthrie reference, the combination does not teach or suggest the above feature. There is no disclosure in the Gyoten and Guthrie references that the air-releasing passage is aligned with the coolant discharge passage on the same side of the separator as the coolant discharge passage is positioned, as recited in amended claim 1.

For at least the reasons set forth above, Applicants respectfully submit that the combination of the Guthrie and Gyoten references does not teach or suggest all of the features recited in amended claim 1. Therefore, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 1 under 35 U.S.C. §103(a).

B. Claims 2, 5 and 6

Claims 2, 5, and 6 depend from amended claim 1 and, as such, incorporate the subject matter recited in amended claim 1. For at least the reasons set forth above with respect to claim 1, Applicants respectfully submit that the combination of the Guthrie and Gyoten references does not teach or suggest all of the features recited in claims 2, 5, and 6. Therefore, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claims 2, 5, and 6 under 35 U.S.C. §103(a).

II. Conclusion

In view of the above comments, Applicants believe that the pending application is in condition for allowance and urges the Examiner to pass the claims to allowance. Should the Examiner feel that a teleconference would expedite the prosecution of this application, the Examiner is urged to contact the Applicant's attorney at (617) 227-7400.

Please charge any shortage or credit any overpayment of fees to our Deposit Account No. 12-0080, under Order No. TOW-051RCE3. In the event that a petition for an extension of time is required to be submitted herewith, and the requisite petition does not accompany this response, the undersigned hereby petitions under 37 C.F.R. §1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized to be charged to the aforementioned Deposit Account.

Dated: December 16, 2009

Respectfully submitted,

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